

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : James H. Murray, et al. :
Serial No. : 10/605,684 : **Group:** 2179
Atty. No : 065217.00003 : **Examiner:** Augustine, Nicholas
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Title : METHOD FOR RETRIEVING INFORMATION ASSOCIATED
WITH AN OBJECT PRESENT IN A MEDIA STREAM

Mail Stop Appeal Brief - Patents
Commissioner of Patents
P.O. Box 1450
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BRIEF ON APPEAL

Dear Sir:

Contemporaneously with the filing of the Notice of Appeal on February 29, 2008, Applicant submits a brief in support of the appeal in response to the Final Rejection set forth in the Office Action dated November 30, 2007. Only a single copy of this Appeal Brief is being submitted in accordance with 37 C.F.R. §41.37 and this Appeal Brief is accompanied by the required fee under §41.20(b)(2).

Real Party in Interest

The inventors, James H. Murray of Bloomfield Hills, Michigan and Neal Fairbanks of Livonia, Michigan are the real parties of interest.

Related Appeals and Interferences

None.

Status of Claims

Claims 1-39 are attached hereto in the appendix. Claims 1-39 stand twice rejected under 35 U.S.C. §103(a) and are the subject of this appeal.

Status of Amendments

All amendments have been entered and are reflected in the claims in the Appendix.

Summary of Claimed Subject Matter

Claim 1 of the subject invention claims a method of retrieving information (10) associated with an object (12) present in a media stream (14). The object (12) is described as including, but are not limited to, clothes, food items, furniture, corporate logos, vehicles, locations, buildings, and the like (*see paragraph [0026], page 12, lines 20-23*). The method comprises the steps of defining a user-selectable region (18) in a layer (20) *separate from the media stream (14) and without accessing individual frames* of the media stream (14), as shown in Figures 4-7 and as described in paragraph [0023], page 9, lines 19-23 and paragraph [0027], page 10, lines 17-23. The user-selectable region (18) *tracks a position of the object* (12) present in the media stream (14) as described in paragraphs [0028]-[0030], page 14, line 11 to page 16, line 16.

A link (34) to information (10) associated with the object (12) is defined and the

user-selectable region (18) in the layer (20) is linked to the link (34) (*see paragraph [0035], page 20, lines 2-20*). The user-selectable region (18) is positioned in the layer (20) over the object (12) such that the user-selectable region (18) ***tracks the position of the object (12) during playback of the media stream (14)*** (*see paragraphs [0028]-[0030], page 14, line 11 to page 16, line 16*).

During playback of the media stream (14), the layer (20) is disposed adjacent the media stream (14) without interfering with playback of the media stream (14) as described in paragraph [0040], page 23, lines 18+ and shown in Figures 5-8. The media stream (14) is played in a player and the user-selectable region (18) ***is selected from within the layer (20)*** (*see paragraph [0040], page 24, lines 1-15*). The information (10) associated with the object (12) is accessed in response to selecting the user-selectable region (18) from within the layer (20) (*see paragraph [0042], page 25, lines 16-23*).

Claim 20 of the subject invention claims a method of providing a video signal (40) from a provider to a user (*see paragraph [0044], page 26, lines 19+*). The method comprises the steps of transmitting a first component of the video signal (40) having a media stream (14) therein and transmitting a second component of the video signal (40). The second component includes a layer (20) with user-selectable regions (18) ***tracking a position of objects (12)*** present in the media stream (14) and the user-selectable regions (18) are linked to information (10) associated with the object (12) (*see paragraphs [0028]-[0030], page 14, line 11 to page 16, line 16*).

The video signal (40) is received with a player and the layer (20) is disposed adjacent the media stream (14) without interfering with playback of the media stream

(14). The media stream (14) is played in the player and the user-selectable region (18) is *synchronized within the layer (20) to a position of the object (12) in the media stream (14) without accessing individual frames* of the media stream (14) and is enabled to allow the user to select the user-selectable regions (18) and access the information (10) associated with the object (12) (*see paragraph [0023], page 9, lines 19-23 and paragraph [0027], page 10, lines 17-23*).

Claim 24 claims a device for storing information (10) associated with an object (12) present in a media stream (14). The device comprises a media stream (14) with an object (12) therein, information (10) associated with the object (12), and a layer (20) for disposition adjacent the media stream (14) during playback. The layer (20) has a user-selectable region (18) *tracking a position of the object (12)* (*see paragraphs [0028]-[0030], page 14, line 11 to page 16, line 16*) in the media stream (14). The user-selectable region (18) is *synchronized within the layer (20) to the position of the object without accessing individual frames of the media stream (14) during playback* (*see Figures 4-7 and paragraph [0023], page 9, lines 19-23 and paragraph [0027], page 10, lines 17-23*). The device also includes a link (34) between the user-selectable region (18) and the information (10) associated with the object (12) for accessing the information (10) associated with the object (12) in response to the user-selectable region (18) being selected (*see paragraph [0035], page 20, lines 2-20*).

Claim 35 claims a system capable of storing and retrieving information (10) associated with an object (12) present in a media stream (14) provided with a video signal

(40) from a provider. The system comprises an editor (22), a player device (16), and a layer (20). The editor (22) defines a user-selectable region (18) *tracking a position of the object* (12) in the media stream (14) *without accessing individual frames of the media stream* (14). The editor (22) also defines a link (34) between the user-selectable region (18) and information (10) associated with the object (12).

The player device (16) plays the media stream (14) with the object (12) therein. The layer (20) is disposed adjacent the media stream (14) during playback and presents the user-selectable region (18) for selection by the user to access the information (10) such that the user-selectable region (18) is *synchronized within the layer (20) to the position of the object (12)* in the media stream (14) *without accessing individual frames of the media stream* (14) (see Figures 4-7 and paragraph [0023], page 9, lines 19-23 and paragraph [0027], page 10, lines 17-23).

Grounds of Rejection to be Reviewed on Appeal

Claims 1-13, 15-33, and 35-39 are rejected under 35 U.S.C. §103(a) as being unpatentable over Wink Communications (<http://web.archive.org/web/20001206040800/-wink.com/>) (hereinafter “Wink I”) in view of Bove titled Adding Hyperlinks to Digital Television (hereinafter “Bove”).

Claims 14 and 34 are rejected under 35 U.S.C. §103(a) as being unpatentable over Wink I in view of Bove in further view of Wink Communications (http://www.itvt.com/screenShotGallery/Intellocity_&_Wink_Communications/page1.html) (hereinafter “Wink II”).

Argument

Rejections under §103(a) of Claims 1-13, 15-33, and 35-39

Applicant respectfully traverses the §103 rejection. Specifically, Applicants submit that the Examiner has not established a *prima facie* case of obviousness.

The Applicants provide the following summary of the relevant standards that the Examiner must adhere to when attempting to establish obviousness of an invention over a combination of references. As both the Applicants and the Examiner are well aware, 35 U.S.C. §103 forbids issuance of a patent when ‘the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.’” *KSR Int’l Co. v. Teleflex Inc.*, 127 S.Ct. 1727, 1734, 82 USPQ2d 1385, 1391 (2007). Further, the question of obviousness is resolved on the basis of the four underlying factual determinations set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 17-18, 148 USPQ 459, 467 (1966). See also *KSR*, 127 S.Ct. at 1734, 82 USPQ2d at 1391. In *KSR*, the Court noted that “[t]o facilitate review, this analysis should be made explicit.” (Emphasis added) *KSR*, 127 S.Ct. at 1740-41, 82 USPQ2d at 1396. (citing *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006) (“[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness”)). However, “the analysis need not seek out precise teachings directed to the specific subject matter of the

challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ.” *Id.*

A factfinder should be aware, of course, of the distortion caused by hindsight bias and must be cautious of arguments reliant upon *ex post* reasoning. See *Graham*, 383 U.S. at 36, 86 S.Ct. 684 (warning against a “temptation to read into the prior art the teachings of the invention in issue” and instructing courts to “ ‘guard against slipping into the use of hindsight’ ” (quoting *Monroe Auto Equipment Co. v. Heckethorn Mfg. & Supply Co.*, 332 F.2d 406, 412 (C.A.6 1964))).

KSR, 127 S.Ct. at 1742, 82 USPQ2d at 1397.

In *KSR*, the Supreme Court emphasized “the need for caution in granting a patent based on the combination of elements found in the prior art,” *id.* at 1739, 82 USPQ2d at 1395, and discussed circumstances in which a patent might be determined to be obvious. In particular, the Supreme Court emphasized that “the principles laid down in *Graham* reaffirmed the ‘functional approach’ of *Hotchkiss*, 11 How. 248.” *KSR*, 127 S.Ct. at 1739, 82 USPQ2d at 1395 (citing *Graham v. John Deere Co.*, 383 U.S. 1, 12 (1966)), and reaffirmed principles based on its precedent that “[t]he combination of familiar elements according to known methods is likely to be obvious **when it does no more than yield predictable results.**” (Emphasis added) *Id.* The Court explained:

When a work is available in one field of endeavor, design incentives and other market forces can prompt variations of it, either in the same field or a different one. If a person of ordinary skill can implement a predictable variation, §103 likely bars its patentability. For the same reason, if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill.

Id. at 1740, 82 USPQ2d at 1396. The operative question in this “functional approach” is thus “whether the improvement is **more than the predictable use of prior art elements according to their established functions.**” (Emphasis added) *Id.*

As clearly explained in *Ex parte Hewett*¹, when analyzing these factors, the Examiner should be aware, of course, of the distortion caused by hindsight bias and must be cautious of arguments reliant upon *ex post* reasoning.²

In response to the outcome of *KSR v. Teleflex*, the MPEP has been updated to provide seven different examples of how the Examiner can establish a *prima facie* case of obviousness. Exemplary rationales from MPEP §2143 that may support a conclusion of obviousness include:

- (A) Combining prior art elements according to known methods to yield predictable results;
- (B) Simple substitution of one known element for another to obtain predictable results;
- (C) Use of known technique to improve similar devices (methods, or products) in the same way;
- (D) Applying a known technique to a known device (method, or product) ready for improvement to yield predictable results;
- (E) "Obvious to try" - choosing from a finite number of identified, predictable solutions, with a reasonable expectation of success;
- (F) Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces if the variations are predictable to one of ordinary skill in the art;
- (G) Some teaching, suggestion, or motivation in the prior art that would have led one of ordinary skill to modify the prior art reference or to combine prior art reference teachings to arrive at the claimed invention.

In the present case, it is unclear which, if any, of the seven examples from MPEP §2143 the Examiner is following to establish the instant obviousness rejections. As will

¹ The Applicant acknowledges that this case is not precedential. However, this does not mean that the statement of the law, especially hindsight, cannot be considered by the Examiner and/or the Board. See Appeal 2006-2827; App. No. 09/883,893

² See *Graham*, 383 U.S. at 36, 86 S.Ct. 684; *KSR*, 127 S.Ct. at 1742, 82 USPQ2d at 1397.

be discussed below in greater detail, Wink I and Bove can not be combined according to known methods to yield predictable results and simple substitution will not yield predictable results. Further, there was no known technique to improve similar devices in the same way and did not yield predictable results. The “obvious to try” standard is not applicable to the subject application in view of the references cited and there was no known work in one field that led to predictable results.

Finally, there is no suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to combine reference teachings. There is no reasonable expectation of success of combining the references and the prior art references when combined do not teach or suggest all the claim limitations.

Declaration of One of Ordinary Skill in the Art

Applicants have submitted a Declaration under 37 C.F.R. §1.132 from Peter Hochstein. Mr. Hochstein has for over 20 years worked in the field of video and computer related technologies. Mr. Hochstein does not have any interest in the outcome of the subject application. As set forth in MPEP §716.01, “Where the evidence is insufficient to overcome the rejection, the examiner must specifically explain why the evidence is insufficient.” The Examiner has failed to identify where the evidence presented by Mr. Hochstein’s analysis is insufficient to overcome the rejection.

In considering the Declaration, the Examiner merely concludes that Mr. Hochstein’s declaration is not persuasive. Even though Mr. Hochstein identified why the

combination of the references as suggested by the Examiner would not yield an operable combination, identified the presence of indicia teaching away from such a combination, identified why such a combination would be undesirable, and identified why such a combination is not obvious (see paragraphs 34-39 of Exhibit A), the Examiner merely concludes it is obvious to one of ordinary skill in the art. The Examiner does not provide any support for his position which appears to be based upon the Examiner's knowledge (including knowledge of the subject application) instead of the knowledge of one of ordinary skill in the art. The Examiner merely "cuts and pastes" the rejections from pages 2-4 after concluding the Declaration was not persuasive.

To rebut the Examiner's unsupported reasoning, Mr. Hochstein has provided a Declaration stating it is not obvious to one of ordinary skill in the art based upon an understanding of the disclosure of the references themselves. Further, Mr. Hochstein opined in paragraph 37, that even if such a combination were made, as one of ordinary skill in the art making the combination, specification limitations claimed in each of the independent claims would not be present in the combination (as discussed further below). Again, the Examiner concludes that based upon his own knowledge and discounting the Declaration from one of ordinary skill in the art, the combination would disclose each and every feature.

Applicant respectfully requests the Office reconsider Mr. Hochstein's declaration in view of the following analysis and remarks, unless the Office is aware of evidence to support the Examiner's rebuttal.

Returning now the §103 rejection, the Examiner contends that it would have been obvious to one of ordinary skill in the art at the time of the invention to have used the teachings of Wink I into the teachings of Bove, because the references solve the same problem of providing interactive TV with hyperlinked data.

There are numerous indicia why the Examiner's mere conclusion regarding obviousness is incorrect. As stated by Mr. Hochstein, when viewing the references as a whole and without the use of impermissible hindsight, the references teach away from making the combination suggested by the Examiner. Even though the Examiner contends that Wink I and Bove solve the same problem, the problems are distinct and the methods used by the references to solve the problem are distinct and incompatible such that the disclosures teaches away from the combination. In other words, the subject application is not combining prior art elements according to known methods to yield predictable results and is not applying a known technique to a known device (method or product) ready for improvement to yield predictable results as discussed in *KSR*.

Specifically, Wink I overcomes the problem of providing information by merely disposing an overlay on top of the media stream and displaying the selectable regions in the overlay. Wink I merely discloses a form that is the overlay on a frame. The form may be designed with various buttons or graphics corresponding to an object. (*See page 6*). Further, the form is designed separate from the media stream and hence the user-selectable region does not *track a position of the object*. (*See page 10*). As such, the user-selectable region does not synchronize to the position of the object during playback of the media stream.

In other words, the solution in Wink I was not to design user-selectable regions over

the object in the media stream. Instead, Wink I provides the overlay separate from the video signal as shown on page 10 of Wink I. The idea of a simple overlay is reinforced by Wink I supporting the use of Interactive Communicating Application Protocol (ICAP) as referenced by Mr. Hochstein. ICAP is a compact protocol that allows for transmission in limited data bandwidth of analog broadcasts. In other words, Wink's separate overlay is designed to consume small amounts of bandwidth to be able to be transmitted in ICAP.

Bove, on the other hand, developed a complex segmentation mask algorithm that identifies pixels in *every frame* of the media stream to position the user-selectable region over the object. The Examiner cites to page 3, paragraph 4 for a suggestion that Bove does not access frames of the media stream. However, page 3, paragraph 4 states:

The user selects a single representative frame from the sequence...and uses the mouse to highlight representative pixels for each desired object. When the author has finished labeling pixels in the frame, our system estimates the location of these pixels *within each of the remaining frames*...{emphasis added}

In other words, Bove provides a system that accesses the media stream *frame by frame* and defines the user-selectable region for each frame of the media stream. In Bove, referring to the Abstract, page 1, the author identifies an object in a "frame of video" and the system generates a segmentation mask for that frame and *following frames*, i.e., frame by frame editing. Bove does provide for automated outlining of items in the frames because they don't "require *manual outlining in every frame*." (See page 3, 3rd paragraph). The segmentation mask for every frame requires large amounts of processing and memory in order to handle the segmentation masks created for every second of video for many objects.

The subject invention allows for quickly and efficiently creating the links in any

media or video stream without having to edit the video stream frame by frame. The subject invention may even allow for creating these links in live broadcast television on a short delay because the links can be created quickly with smaller amounts of memory and processing.

As discussed in detail in the Background of the Invention section, specifically paragraphs [0007] and [0008], of the originally filed specification, frame by frame editing is well known. Also well known are the drawbacks to such methodologies. For example, a half-hour media stream would have 3,600 frames and the system disclosed in Bove would require each of the 3,600 frames to be edited. Independent of whether the frames are edited manually or automatically, the resources to perform such an operation are large.

Therefore, the subject invention provides a novel and unique method and system for defining the user-selectable regions without accessing individual frames of the media stream. The user-selectable regions can be defined quickly and seamlessly without having to edit individual frames of the media stream. The resources required to perform the subject invention are reduced as compared to the system disclosed in Bove et al.

Wink I and Bove each utilize different and distinct methods to provide the object information, i.e. overlay versus mask segmentation, and the combination of techniques does not have a reasonable expectation of success. Wink I reduces the consumption of bandwidth by merely providing a single overlay for display over the video, whereas Bove requires large amounts of bandwidth to accommodate the edited video with the segmentation mask for each frame or the large number of frames, i.e., one frame every second (1800 frames).

Finally, even if the references could be combined, each and every feature of the subject invention would not be disclosed, taught, or suggested. Referring to claim 1, the combination does not disclose, teach, or suggest defining a user-selectable region in a layer separate from the media stream *and without accessing individual frames of the media stream*. The user-selectable region *tracks a position* of the object present in the media stream. The combination also does not disclose, teach, or suggest the user-selectable region is positioned *in the layer over the object* such that the user-selectable region *tracks the position of the object during playback of the media stream*.

Referring to claim 20, the combination fails to disclose, teach, or suggest, a second component of a video signal is transmitted having a layer with user-selectable regions *tracking a position of objects present in the media stream* and linked to information associated with the object. The combination further fails to disclose, teach, or suggest *synchronizing* the user-selectable region within the layer to a position of the object in the media stream *without accessing individual frames of the media stream*.

With reference to claim 24, the combination fails to disclose, teach, or suggest, a layer for disposition adjacent the media stream during playback and having a user-selectable region *tracking a position of the object in the media stream to synchronize the user-selectable region within the layer to the position of the object in the media stream without accessing individual frames of the media stream during playback*.

Referring to claim 35, the combination fails to disclose, teach, or suggest, an editor defining *a user-selectable region tracking a position of the object in the media stream without accessing individual frames of the media stream* and defining a link between the user-selectable region and information associated with the object. The

combination further fails to disclose, teach, or suggest a layer disposed adjacent the media stream during playback and presenting the user-selectable region for selection by the user to access the information such that *the user-selectable region is synchronized within the layer to the position of the object in the media stream without accessing individual frames of the media stream.*

It is respectfully submitted that the §103 rejection should be withdrawn and claims 1-13, 15-33, and 35-39 are believed to be allowable.

Rejections under §103(a) of Claims 14 and 34

The Examiner relies upon Wink I in view of Bove in further view of Wink II. As discussed below, Wink II does not identify a publication date itself other than a copyright date of 1998-2003. The subject application has an effective filing date July 31, 2000 and claims 14 and 34 are supported in the original disclosure and are entitled to such a filing date. Thus, the Examiner's reliance on a copyright date as establishing a date of the prior art is erroneous and the rejection should be withdrawn.

Further, Applicants respectfully submit that claims 14 and 34 depend from allowable independent claims and as such are believed to be allowable.

Rejections relying upon Unauthenticated, Undated, and Non-enabled Web Sites

Applicants have set forth above, that even if the references cited by the Examiner are in fact properly authenticated and dated and are in fact prior art to the subject application, numerous indicia are missing from the Examiner's *prima facie* case of obviousness and, as such, the claims are believed to be allowable independent of the

improper use of these references.

However, increasingly the United States Patent Office is continuing to rely on the internet as a source of prior art and such use by Examiners is fraught with pitfalls unless the United States Patent Office adequately instructs its' Examiners on the requirement of proper authenticating and dating of references obtained therefrom. In view of the foregoing, Applicant respectfully submits that the Examiner has not properly established the publication date and/or authenticity of the information published to satisfy the requirements of 35 U.S.C. §102.

It is believed that the Examiner has improperly relied upon back dated copies of web sites that are unauthenticated and undated and that the Examiner has not satisfied his burden that these references are prior art references. The MPEP §901.06 states that non-patent publications may be used as references as of the date of publication. Further, MPEP §2128.02 states that the date of accessibility can be proven through routine business practices. The purpose of establishing the date of publication is verifying that such references are truly prior art to the subject application. Moreover, MPEP §2128 states

Prior art disclosures on the Internet or on an on-line database are considered to be publicly available as of the date the item was publicly posted. *>Absent evidence of the date that the disclosure was publicly posted, if< the publication >itself< does not include a publication date (or retrieval date), it cannot be relied upon as prior art under 35 U.S.C. 102(a) or (b)*>. However<, it may be relied upon to provide evidence regarding the state of the art. Examiners may ask the Scientific and Technical Information Center to find the earliest date of publication >or posting<. See MPEP § 901.06(a), paragraph IV. G.

The Examiner relies upon another web site, namely, the "Way Back Machine" at web.archive.org for proof of publication. However, there has been much discussion

about the impropriety of relying upon such dating methods as there are concerns that the content and dates can be circumvented. Applicants are unaware of any authority under which the Examiner relies on this above method to authenticate and date the web sites.

The requirement of a publication date is to authenticate the content and the date upon which the content was publicly available. Individuals with computer skills are able to manipulate static web sites and alter the content and these altered web sites could then be submitted to these third parties to be dated.

The subject application was filed as a continuation-in-part of United States Patent No. 6,636,237 on October 17, 2003 and has an effective filing date of July 31, 2000. The Examiner contends that Wink I, which is the main reference relied upon, has a publication date in the 1999 time frame because this is what the "Way Back Machine" indicates on its web site. However, exactly when the content that the Examiner relies upon was added to the web site is unclear.

Further, the Examiner relies upon the publication date of Wink II to be at least by the 2003 time period because the web site has a copyright date of 1998-2003. Again, one of marginal computer skill could alter the copyright date to any desired date. This does not prove that any of the content that is currently available was published at this time.

To constitute an anticipatory reference, the prior art must contain an enabling disclosure. *Chester v. Miller*, 906 F.2d at 1576 n.2, 15 U.S.P.Q.2d at 1336 n.2 (Fed. Cir. 1990); *see also Titanium Metals Corp. of America v. Banner*, 778 F.2d at 781, 227 U.S.P.Q. at 778 (Fed. Cir. 1985); *Scripps Clinic & Research Found. v. Genentech, Inc.*, 927 F.2d 1565, 1578, 18 U.S.P.Q.2d 1001, 1011 (Fed. Cir. 1991); *Helifix Ltd. v. Blok-Lok, Ltd.*, 208 F.3d 1339, 54 U.S.P.Q.2d 1299 (Fed. Cir. 2000) citing *In re*

Donohue, 766 F.2d 531, 533, 226 U.S.P.Q. 619, 621 (Fed. Cir. 1985). The requirement that an enabling disclosure place the public in possession of the invention is consistent with the fundamental purpose of the patent law to promote the sciences and useful arts through the disclosure of useful knowledge.

Further, Wink I and Wink II does not enable one of skill in the art to practice the invention. Web sites typically speak in broad, marketing generalities and marketing terminology and do not disclose the specifics of the subject matter. As such, Wink I and Wink II do not provide an enabling disclosure as relied upon by the Examiner for each limitation.

Applicants, at their own accord upon receiving the Examiner's rejection, undertook a search to locate any patents related to either Wink I or Wink II to gain an understanding of what was disclosed and how the disclosure operated. Applicant submitted numerous patents that were granted to Wink Communications that appeared to disclose the subject matter of the web sites, specifically United States Patent No. 5,848,352, and discussed the same with the Examiner in an Interview.

Applicant distinguished the claimed invention from these references and highlighted these references to the Examiner in Applicant's response dated December 8, 2006. The Examiner merely maintained the rejections based upon Wink I and Wink II without commenting on the differences between the '352 patent and Wink I or Wink II.

Applicants submit that the use of Wink I and Wink II as prior art references by the Examiner to maintain the rejections is improper and the rejections should be withdrawn.

CLOSING

For the reasons set forth above, the rejections of Claims 1-39 under 35 U.S.C. §103(a) must be reversed.

Respectfully submitted,

HOWARD & HOWARD ATTORNEYS, P.C.

February 29, 2008
Date

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CLAIMS APPENDIX

1. **(Previously Presented)** A method of retrieving information (10) associated with an object (12) present in a media stream (14), said method comprising the steps of:

defining a user-selectable region (18) in a layer (20) separate from the media stream (14) and without accessing individual frames of the media stream (14), the user-selectable region (18) tracking a position of the object (12) present in the media stream (14);

defining a link (34) to the information (10) associated with the object (12);

linking the user-selectable region (18) in the layer (20) to the link (34) for the information (10) associated with the object (12);

positioning the user-selectable region (18) in the layer (20) over the object (12) such that the user-selectable region (18) tracks the position of the object (12) during playback of the media stream (14);

disposing the layer (20) adjacent the media stream (14) without interfering with playback of the media stream (14);

playing the media stream (14) in a player;

selecting the user-selectable region (18) from within the layer (20) during playback of the media stream (14); and

accessing the information (10) associated with the object (12) in response to selecting the user-selectable region (18) from within the layer (20).

2. **(Original)** A method as set forth in claim 1 wherein the step of defining the user-selectable region (18) is further defined as the step of defining positional data for the

object (12) based upon a position and size of the object (12) present in the media stream (14).

3. **(Original)** A method as set forth in claim 1 further including the step of re-defining the user-selectable region (18) within the layer (20) in response to the object (12) changing within the media stream (14).

4. **(Original)** A method as set forth in claim 1 wherein the step of defining the user-selectable region (18) further includes the step of defining a plurality of user-selectable regions (18) for the object (12) in response to the object (12) being present in a plurality of positions in the media stream (14).

5. **(Original)** A method as set forth in claim 1 wherein the step of positioning the user-selectable region (18) is further defined as synchronizing the user-selectable region (18) within the layer (20) to a position of the object (12) in the media stream (14) without accessing individual frames of the media stream (14).

6. **(Original)** A method as set forth in claim 1 further including the step of displaying an icon (36) within the layer (20) representing the user-selectable region (18) present in the layer (20) capable of being selected.

7. **(Original)** A method as set forth in claim 1 further including the step of monitoring an identifying characteristic for the object (12) in the media stream (14).

8. **(Original)** A method as set forth in claim 7 wherein the step of monitoring the identifying characteristic is further defined as monitoring the media stream (14) for a predetermined color palette.

9. **(Original)** A method as set forth in claim 7 wherein the step of monitoring the identifying characteristic is further defined as monitoring the media stream (14) for a predetermined symbol.

10. **(Original)** A method as set forth in claim 7 further including the step of detecting a change in the identifying characteristic and re-defining the user-selectable region (18) within the layer (20) in response to detecting the change of the identifying characteristic.

11. **(Original)** A method as set forth in claim 10 wherein the step of detecting the change in the identifying characteristic is further defined as automatically detecting the change in the identifying characteristic for the object (12) during playback of the media stream (14).

12. **(Original)** A method as set forth in claim 11 wherein the step of re-defining the user-selectable region (18) is further defined as automatically re-defining the user-selectable region (18) within the layer (20) in response to automatically detecting the change in the identifying characteristic for the object (12).

13. **(Original)** A method as set forth in claim 1 further including the step of stopping playback of the media stream (14) in response to selecting the user-selectable region (18) from within the layer (20).

14. **(Original)** A method as set forth in claim 13 further including the step of displaying the object information (10) in at least one of the layer (20), the player, and a window separate from the layer (20) and the player, while the playback of the media stream (14) is stopped.

15. **(Original)** A method as set forth in claim 1 further including the step of continuing playback of the media stream (14) in response to selecting the user-selectable region (18) from within the layer (20).

16. **(Original)** A method as set forth in claim 15 further including the step of displaying the object information (10) in at least one of the layer (20) and a window separate from the layer (20) while the playback of the media stream (14) continues in the player.

17. **(Original)** A method as set forth in claim 1 further including the step of establishing two-way Communications between a user interacting with the layer (20) and a provider transmitting a video signal (40) having the media stream (14) and the layer (20).

18. **(Original)** A method as set forth in claim 17 further including the step of collecting user data related to selection of links made during playback of the media stream (14) present therein.

19. **(Original)** A method as set forth in claim 18 further including the step of transmitting the user data to the provider to track the links selected from within the layer (20).

20. **(Previously Presented)** A method of providing a video signal (40) from a provider to a user, said method comprising the steps of:

transmitting a first component of the video signal (40) having a media stream (14) therein;

transmitting a second component of the video signal (40) having a layer (20) with user-selectable regions (18) tracking a position of objects (12) present in the media

stream (14) and linked to information (10) associated with the object (12);

receiving the video signal (40) with a player;

disposing the layer (20) adjacent the media stream (14) without interfering with playback of the media stream (14);

playing the media stream (14) in the player;

synchronizing the user-selectable region (18) within the layer (20) to a position of the object (12) in the media stream (14) without accessing individual frames of the media stream (14); and

enabling the user-selectable region (18) to allow the user to select the user-selectable regions (18) and access the information (10) associated with the object (12).

21. **(Original)** A method as set forth in claim 20 further including the step of establishing two-way Communications between the user interacting with the layer (20) and the provider transmitting the video signal (40).

22. **(Original)** A method as set forth in claim 21 further including the step of collecting user data related to selection of links made during playback of the media stream (14).

23. **(Original)** A method as set forth in claim 22 further including the step of transmitting the user data to the provider to track the links selected from within the layer (20).

24. **(Previously Presented)** A device for storing information (10) associated with an object (12) present in a media stream (14), said device comprising:

a media stream (14) with an object (12) therein;

information (10) associated with said object (12);

a layer (20) for disposition adjacent said media stream (14) during playback and having a user-selectable region (18) tracking a position of said object (12) in said media stream (14) to synchronize said user-selectable region (18) within said layer (20) to the position of the object (12) in the media stream (14) without accessing individual frames of the media stream (14) during playback; and

a link (34) between said user-selectable region (18) and said information (10) associated with said object (12) for accessing said information (10) associated with said object (12) in response to said user-selectable region (18) being selected.

25. **(Original)** A device as set forth in claim 24 further including positional information defined for said user-selectable region (18) based upon a position and size of said object (12) present in said media stream (14).

26. **(Original)** A device as set forth in claim 25 further including a plurality of user-selectable regions (18) in said layer (20) corresponding to a plurality of objects (12).

27. **(Original)** A device as set forth in claim 24 further including an icon (36) disposed in said layer (20) in response to said user-selectable region (18) being present in said layer (20).

28. **(Original)** A device as set forth in claim 24 further including a detector for monitoring and detecting an identifying characteristic for the object (12) with said layer (20).

29. **(Original)** A device as set forth in claim 28 wherein said detector is further defined as detecting a color palette.

30. **(Original)** A device as set forth in claim 28 wherein said detector is further defined as detecting a predetermined symbol.

31. **(Original)** A device as set forth in claim 24 further including a window for displaying information (10) associated with the object (12).

32. **(Original)** A device as set forth in claim 31 wherein said window is further defined as being displayed in said layer (20).

33. **(Original)** A device as set forth in claim 31 wherein said window is further defined as being displayed in said media stream (14).

34. **(Original)** A device as set forth in claim 31 wherein said window is further defined as a window separate from said layer (20) and said media stream (14).

35. **(Previously Presented)** A system capable of storing and retrieving information (10) associated with an object (12) present in a media stream (14) provided with a video signal (40) from a provider, said system comprising:

an editor (22) defining a user-selectable region (18) tracking a position of the object (12) in the media stream (14) without accessing individual frames of the media stream (14) and defining a link (34) between said user-selectable region (18) and information (10) associated with said object (12);

a player device (16) for playing the media stream (14) with the object (12) therein; and

a layer (20) disposed adjacent the media stream (14) during playback and presenting the user-selectable region (18) for selection by the user to access the information (10) such that said user-selectable region (18) is synchronized within said layer (20) to the position of

the object (12) in the media stream (14) without accessing individual frames of the media stream (14).

36. **(Previously Presented)** A system as set forth in claim 35 wherein the layer (20) is further defined as being transmitted as a component of the video signal (40).

37. **(Previously Presented)** A system as set forth in claim 35 wherein the layer (20) disposed adjacent the media stream (14) is further defined as being disposed adjacent the media stream (14) without interfering with playback of the media stream (14).

38. **(Previously Presented)** A system as set forth in claim 35 further including a plurality of user-selectable regions (18) in said layer (20) corresponding to a plurality of objects (12).

39. **(Previously Presented)** A system as set forth in claim 35 further including an icon (36) disposed in said layer (20) in response to said user-selectable region (18) being present in said layer (20).

EVIDENCE APPENDIX

Exhibit A: Declaration under 37 C.F.R. §1.132 of Peter Hochstein

EXHIBIT A

DECLARATION UNDER 37 C.F.R. § 1.132

I, Peter Hochstein, hereby state that:

1. I am a citizen of the United States.
2. I am currently employed Relume Technologies, Oxford, MI, specializing in innovative LED light engine solutions for corporate signage, automotive, airlines, safety devices and the U.S. military.
3. I am not an inventor of the United States Patent Application No. 10/605,684 (the subject application) or United States Patent No. 6,636,237 (the parent patent).
4. I do not have any interest in the outcome of the subject application.

Background

5. I have worked in the field of video and computer related technologies for over 20 years and I am a person highly skilled in the art of such video and computer related technologies.
6. I earned a Bachelor of Science degree in Physics from Acton College in 1968.
7. In addition, I am an inventor of over 85 issued United States Patents. My inventions have included, but are not limited to, such technologies as communications between local and remote video games and display technology related to the same, optic fiber technologies, audio transducers, self-tuning antennas, rain sensors for windshield, LED devices, and many other mechanical and electrical automotive devices.
8. Further, I have been involved with encrypted, optical communication technology and solid state lighting.

The Subject Application

9. I have reviewed the subject application and the parent patent. I am familiar with the pending claims of the subject application. As I understand the subject application, claims 1, 20, 24, and 35 are in independent form.

10. The subject application, as I understand it, with reference specifically to claim 1, claims a method of retrieving information associated with an object present in a media stream by defining a user-selectable region in a layer separate from the media stream *and without accessing individual frames of the media stream*. The user-selectable region *tracks a position* of the object present in the media stream. In other words, the user-selectable region is defined without accessing individual frames and the user-selectable regions tracks a position of the object as the object moves around in the media stream. A link is defined to information associated with the object and the user-selectable region is linked in the layer to the link for the information associated with the object. Next, the user-selectable region is positioned *in the layer over the object* such that the user-selectable region *tracks the position of the object during playback of the media stream*. Again, the subject application provides that the user-selectable region tracks the position of the object which has been defined without accessing individual frames of the media stream.

11. Referring to claim 20, the subject application claims a method of providing a video signal from a provider to a user wherein a second component of a video signal is transmitted having a layer with user-selectable regions *tracking a position of objects present in the media stream* and linked to information associated with the object. The method further claims *synchronizing* the user-selectable region within the layer to a position of the object in the

media stream *without accessing individual frames of the media stream*. The user-selectable region is enabled to allow the user to select the user-selectable regions and access the information associated with the object.

12. Referring to claim 24, the subject application claims a device for storing information associated with an object present in a media stream. The device comprises a media stream with an object therein, information associated with the object, and a layer for disposition adjacent the media stream during playback. The layer has a user-selectable region *tracking a position of the object in the media stream to synchronize the user-selectable region within the layer to the position of the object in the media stream without accessing individual frames of the media stream during playback*.

13. Referring to claim 35, the subject application claims a system capable of storing and retrieving information associated with an object present in a media stream provided with a video signal from a provider. The system comprises an editor defining *a user-selectable region tracking a position of the object in the media stream without accessing individual frames of the media stream* and defining a link between the user-selectable region and information associated with the object. The system further comprises a layer disposed adjacent the media stream during playback and presenting the user-selectable region for selection by the user to access the information such that *the user-selectable region is synchronized within the layer to the position of the object in the media stream without accessing individual frames of the media stream*.

14. Generally, those of ordinary skill in the art appreciate that video is captured and played back at 30 frames per second. Thus, for a 30 minute (1800 seconds) video, there are 54,000 frames.

15. The subject application allows for quickly and seamlessly defining user-selectable regions for any object in the media stream without having to edit the individual frames of the media stream. If the user-selectable regions were defined by editing individual frames, either completely or partially, a substantial amount of resources is required. The subject application, on the other hand, developed a method and system free from accessing individual frames while still providing the user-selectable regions tracking an object in the media stream. The subject application minimizes cost associated with creating the user-selectable regions since the individual frames are not being edited which makes the technology economically feasible.

Prior Technologies

16. Prior to the subject application, as one of ordinary skill in the art, I was aware of various techniques to provide information to viewers of a media stream.

17. One method provides overlays on top of a media stream in a separate window that would provide basic information relating to the content of the media stream. Examples of this technology include interactive television guides. However, this method did not provide links to specific objects in the media stream and does not track a position of an object in the media stream.

18. Another method known to me involved editing of individual frames of the media stream and creating "hot spots" based upon the object being present in individual frames. This method requires a significant outlay of time and effort to establish the hot spots and is not practical. As mentioned above, editing frames of video for a 30 minute video would require 54,000 frames to be edited. Even if every single frame is not edited and the media stream is only

edited partially, such as one frame a second, this would still require 1,800 edits. For a 30 minute video, this is burdensome to develop.

19. Prior to the subject application, I was aware that the video industry was increasingly searching for a system and method to advertise product placement in a new medium as a result of decreases in the success of traditional advertising and increases in technologies that allowed skipping of traditional commercials. I was aware that many attempts had been made, as early as the 1980's, to develop hyperlinks in video by editing the video frame by frame and inserting the respective hyperlinks in each frame, especially in video game arts. However, prior to the subject application, the video industry has been unsuccessful to provide a system or method that would be feasible given time and budget constraints that did not rely on frame by frame editing or that merely provided a graphic overlay.

The Cited References

20. I am aware of, have read, and understand the disclosure of "Wink Communications: A Smarter Way to Watch TV", dated 08/30/2006, pages 1-13, and indicating <http://web.archive.org/web/19991012081750/http://wink.com/> (hereinafter "Wink").

21. As one of ordinary skill in the art, when considering Wink as a whole, Wink discloses a system and method for creating a form or overlay to be displayed in a viewer or screen. This overlay is very similar to traditional interactive video guides that overlay the video in response to a user pushing a button for the information. Wink provides an icon on the screen to indicate that information is available about the program. The user pushes a button and the information is retrieved.

22. Wink discloses, on page 6, that the interactive features are created by dragging objects onto a form to create the overlay. Referring to page 10, the form is designed separate from the media stream.

23. Wink discloses, on page 5, that Wink supports the use of Interactive Communicating Application Protocol (ICAP). ICAP is a compact protocol that allows for transmission in limited data bandwidth of analog broadcasts. In other words, Wink's overlay is designed to consume small amounts of bandwidth to be able to be transmitted in ICAP.

24. As one of ordinary skill in the art, Wink does not disclose, teach, or suggest defining the user-selectable region in a layer such that the user-selectable region is positioned in the layer over the object. Instead, Wink discloses that the user-selectable region is only positioned in the form and is not positioned over the object as the object moves or in the layer.

25. Thus, as one of ordinary skill in the art, without impermissibly considering the subject application, I would not have understood Wink to disclose, teach, or suggest at the time of the invention positioning the user-selectable region over the object because Wink circumvented this need by disposing the region in the form.

26. Further, Wink does not disclose, teach, or suggest to one of ordinary skill in the art that the user-selectable region is linked in the layer to a link for information about the object. Again, Wink positions the user-selectable region in the form and as such the user-selectable region is not linked in the layer to the link for the object information.

27. Thus, as one of ordinary skill in the art, without impermissibly considering the subject application, I would not have understood Wink to disclose, teach, or suggest at the time of the invention the linking of the user-selectable region in the layer because Wink circumvented this

need by the user-selectable region being present only in the form.

28. I am also aware of, have read, and understand the disclosure of "Adding Hyperlinks to Digital Television", V. Michael Bove, Jr. et al., Proc. 140th SMPTE Technical Conference, 1998 (hereinafter "Bove").

29. As one of ordinary skill in the art, when considering Bove as a whole, Bove discloses a system and method for creating hyperlinks in a video by accessing individual frames of the video. Bove discloses that the system will automatically create a segmentation mask for each individual frame of the video after a user identifies an object in a frame of the video. Referring to page 1, Bove states that the author scribbles on a desired object in a frame and the systems generates a segmentation mask for that frame and *following frames*. In other words, Bove creates these hyperlinks by accessing individual frames of the video.

30. With reference to page 2, Bove identifies the challenges of creating the clickable regions in every frame *manually* and the difficulty of segmenting and tracking them automatically. The solution disclosed in Bove, as set forth in the second paragraph on page 2, is generating the segmentation mask for a frame of video and continues generating the mask for following and preceding frames, i.e., frame by frame. Bove relies on the pixels in each individual frame for the segmentation mask to properly identify the object. Thus, if Bove did not edit the video frame by frame, the resultant segmentation mask would not function properly.

31. Referring to page 3, second paragraph under the heading "Segmenting Objects", Bove states that the system classifies every pixel in every frame in the video. Further, Bove states that the author classifies pixels in a single frame and the pixels are then tracked through the remainder of the frames of the video. In the third paragraph under the heading "Segmenting

Objects”, Bove discloses that the system estimates the location of the pixels within each of the remaining frames in the video.

32. As one of ordinary skill in the art, Bove does not disclose, teach, or suggest defining user-selectable regions without accessing individual frames of the video that track a position of the object in the media stream. Instead, Bove requires that the editing be conducted frame by frame.

33. In Figure 1 on page 8, the system and method of Bove is shown whereby the user has scribbled lines in the top picture. The system creates the segmentation mask shown in the bottom picture, i.e. frame by frame. The system then generates the segmentation mask for the following and preceding frames. On page 10, Bove discloses that the segmentation mask required retraining by the user approximately every second of video. In other words, the user has to retrain the segmentation mask roughly 1800 times for a 30 minute video.

Analysis

34. As a result of my review of Wink in view of Bove, it is not be obvious to me as one of ordinary skill in the art to combine the teachings of Wink with Bove. First, the system and method disclosed in Wink merely describes an overlay that has information tied to the media stream. In other words, one skilled in the art would not be motivated to convert the overlay disclosed in Wink into user-selectable regions that track the position of the object in the media stream. Instead, Wink teaches away from developing such a system by utilizing the overlay.

35. Second, the combination of Wink with Bove has no reasonable expectation of success. As described above, Wink circumvents the issue of defining user-selectable regions that track a position of the object in the media stream by employing the generic overlay and disposing

the user-selectable regions within the overlay. Bove teaches editing the video frame by frame to locate the pixels and to create the segmentation mask. The combination of an overlay with a segmentation mask would not produce a system or method that provides user-selectable regions that tracks the position of the object without accessing individual frames of video as claimed.

36. Third, Wink discloses that ICAP is supported such that the overlays produced via Wink consume smaller amounts of bandwidth and are able to be transmitted utilizing ICAP. Bove, on the other hand, requires large amounts of processing and memory in order to handle the segmentation masks created for every second of video for many objects. Said another way, Bove would consume large amounts of bandwidth in providing the segmentation mask for individual frames for even a single object. Therefore, it would not be reasonable to expect the combination of Wink with Bove to be successful and teaches away from combining the disclosures.

37. Additionally, if even the combination of Wink and Bove were proper, the combination would not arrive at the claimed invention. As set forth above, each of the independent claims require user-selectable regions *tracking a position of objects present in the media stream* and the user-selectable regions being defined *without accessing individual frames of the media stream*. Further, the independent claims require the user-selectable region to be *synchronized* within the layer to a position of the object in the media stream again without accessing individual frames of the media stream.

38. At best, the combination of the user-selectable regions of Bove with the overlay of Wink would require the editing of the individual frames of the video to incorporate the user-selectable regions of Bove. The combination would not produce user-selectable regions that track the position of the object without accessing individual frames and that are defined without

accessing individual frames. Moreover, the combination would not produce the user-selectable region to be *synchronized* within the layer to a position of the object in the media stream again without accessing individual frames of the media stream.

39. Given that Wink teaches away from using the user-selectable regions of Bove, given that the combination has no reasonable expectation of success, and given that the combination does not arrive at the claimed invention, as one of ordinary skill in the art, there is no teaching or suggestion to combine the references. In fact, there are numerous indicia that suggest the combination is improper and each element of the claimed invention would not be shown if the combination was proper.

Conclusion

40. The subject application provides a solution that the video industry has been seeking for many years. Specifically, being able to define user-selectable regions that track a position of objects present in the media stream without accessing individual frames of the media stream. The subject application will allow a new medium of advertising to move forward. As described above, merely providing an overly has not been an adequate solution and requiring frame by frame editing has not been a solution. The subject application transcends these prior attempts and provides a solution that does not require frame by frame editing and thus provides a new solution.

41. Even in view of the cited references, as one of ordinary skill in the art, I would not have arrived at claimed system and methods of the subject application for the reasons set forth above.

42. None of the cited references disclose, teach, or suggest, alone or in combination, a

system or method of defining user-selectable regions *tracking a position of objects present in the media stream defined without accessing individual frames of the media stream.*

43. Further, none of the cited references disclose, teach, or suggest, alone or in combination, user-selectable regions *synchronized* within the layer to a position of the object in the media stream again without accessing individual frames of the media stream.

Declaration

44. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information are believed to be true, and further that these statements were made with the knowledge that willful and false statements and the like are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or patent issued thereon.

Respectfully submitted,

Dated Sept. 6th 2007

A handwritten signature in black ink, appearing to read "Peter Hochstein", written over a horizontal line.

Peter Hochstein

RELATED PROCEEDINGS APPENDIX

NONE